

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (Canceled)

Claim 2 (Currently amended): An illumination apparatus in which a through-hole for detection is formed at a center portion and which irradiates diffused light and directional light to an object to be detected,

characterized in that at least[[,]] an annular diffusion plate which diffuses light, light sources which are allocated annularly, and an annular reflection plate which reflects light from the light source~~source~~ to said object to be detected, are respectively allocated[[,]] in ~~the order from a~~the side of said object to be detected, and the diffused light is generated by irradiating light from said light source~~source~~ to the object to be detected[[,]] through said diffusion plate~~diffused light~~, and the directional light is generated by reflecting light from said light source~~source~~ by said reflection plate~~light~~ and then[[,]] irradiating it to the object to be detected, and

the light sources ~~includes~~~~source~~ ~~comprises two kinds of~~
a light source for diffused light and a light source for

directional light, and an annular fixing plate on which the light source for diffused light ~~is~~was disposed on a surface ~~facing which becomes the side of~~ said object to be detected, and the light source for directional light ~~is~~was disposed on ~~another~~the other surface of the fixing plate ~~and, was disposed~~ between said diffusion plate and said reflection plate.

Claim 3 (Currently amended): The illumination apparatus as set forth in claim 2, characterized in ~~hat~~that the light source for directional light is attached through a flexible elastic pin from said fixing plate.

Claim 4 (Previously presented): The illumination apparatus as set forth in claim 2 or 3, characterized in that an illumination control section, which individually controls the light source for diffused light and the light source for directional light, is provided, and the illumination control section carries out a switch operation for switching over lighting of each light source, and an adjustment operation for changing illumination intensity of each light source.

Claim 5 (Currently amended): The illumination apparatus as set forth in ~~any one of claims 2 through~~claim 4,

characterized in that said reflection plate is a side end face of an inner surface of ~~a~~the case which provides accommodation for said light ~~source~~source and said diffusion plate.

Claim 6 (Currently amended): The illumination apparatus as set forth in claim 5, characterized that at least ~~the~~a side end face of said case inner surface is of a white color or a metal color.

Claim 7 (Currently amended): A recognition apparatus characterized by being equipped with the illumination apparatus as set forth in claim~~which was described in anyone of claims 2 through 6~~, an image pickup camera which picks up an image of the object to be detected, which was illuminated by the illumination apparatus, and a control section which ~~carries~~carries out recognition processing of the object to be detected, by use of the image which was picked up.

Claim 8 (Currently amended): A component mounting apparatus which has an absorption nozzle, with which a transfer head, which moves on ~~an~~the upper side of a substrate, was equipped, absorbed and held a component,

and transfers said transfer head to mount the component on the substrate at a predetermined position,

characterized in that a recognition apparatus which is disposed on said transfer head and detects a mark for alignment which was disposed on said substrate and corrects a mounting position of said component depending on a detection position of the mark for alignment is the recognition apparatus which is described in claim 76.

Claim 9 (Currently amended): A component mounting apparatus which has an absorption nozzle, with which a transfer head, which moves on ~~an~~the upper side of a substrate, was equipped, absorbed and held a component, and transfers said transfer head to mount the component on the substrate at a predetermined position,

characterized in that a recognition apparatus which is disposed on ~~a~~the lower side of said transfer head and recognizes a component which was absorbed and held by said absorption nozzle is the recognition apparatus which is described in claim 76.